

CLAIMS

1. A magnetic force generator comprising:
a magnetic shell internally defining an armature chamber having
an axis;
at least three circumferential electric coils spaced axially within
5 the chamber;
an armature supported in the chamber for reciprocation on the
axis, the armature including a plurality of aligned magnets separated by at
least one intermediate magnetic steel plate sandwiched between like poles of
adjoining magnets and a pair of end steel magnetic plates on opposite ends of
10 the armature, the plates extending laterally to a periphery of the armature in
general lateral alignment with the electric coils; and
resilient members nominally centering the armature between non-
magnetic ends of the chamber;
controlled energizing of the coils being operative on the magnetic
15 plates to reciprocate the armature axially in a controlled manner relative to
the shell to develop an opposite inertia force on the shell for application to a
connected body.
2. A magnetic force generator as in claim 1 wherein the resilient
members are compression springs.
3. A magnetic force generator as in claim 1 wherein the number
of aligned magnets is two.
4. A magnetic force generator as in claim 1 wherein the aligned
magnets are ring magnets.

5. A magnetic force generator as in claim 1 wherein the number of the intermediate and end steel magnetic plates in the armature is equal to the number of the circumferential electric coils spaced within the shell.

6. A magnetic force generator as in claim 1 wherein the magnetic shell is part of a housing including non-magnetic end members closing the ends of the chamber.

7. A magnetic force generator comprising:
 a magnetic shell internally defining an armature chamber having an axis;
 at least three circumferential electric coils spaced axially within
 5 the chamber;
 an armature supported in the chamber for reciprocation on the axis, the armature including a plurality of aligned magnets separated by at least one intermediate magnetic steel plate sandwiched between like poles of adjoining magnets and a pair of end steel magnetic plates on opposite ends of
 10 the armature, the plates extending laterally to a periphery of the armature in general lateral alignment with the electric coils; and
 resilient members nominally centering the armature between ends of the chamber;
 controlled energizing of the coils being operative on the magnetic
 15 plates to reciprocate the armature axially in a controlled manner relative to the shell to develop an opposite inertia force on the shell for application to a connected body.